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21. (Previously Added) The method of Claim 1, wherein said subnet is a ~~single hop wireless~~ network.

REMARKS

Claims 1-3 and 5-21 are pending in the application.

Claims 1-3, 5-9 and 12-21 are rejected.

Claims 10-11 are objected to.

Claim 1, 13 and 20 are amended.

Prior Art Rejections

Claims 1-3, 5-9, and 12-21 have been rejected under 35 USC §102(e) or 103(a) as being either anticipated by or obvious in view of Kumaki et al. (US Patent 6,473,411).

Applicant respectfully requests withdrawal of the Examiner's rejections regarding Claims 1-3, 5-9 and 12-21 and reconsideration of the claims as the claims are believed to be distinguishable over the cited reference, since all of the limitations of the claims as presented are not found in the cited references. Applicants respectfully submit that no new issues are raised by the amendments herein. Additionally, Examiner is reminded that he has in the past indicated allowable subject matter of certain claims and had then withdrawn same causing applicants to expend additional monies unnecessarily. Thus, applicants thank the Examiner in advance for a reasonable reconsideration of the claims.

Kumaki et al. discloses a Mobile Supporting Router (MSR) device that carries out the handoff of a mobile terminal from one base station to another by "switching of the transfer route at the datalink level, so as to be able to realize the handoff faster than the conventional handoff technique on the network layer level" (col 56, lines 26-37). The present invention, as claimed in Claim 1, for example, deals with the handoff at the network (IP) layer. Claim 1 (as well as

Claim 10) has been amended to specify that the handoff processing occurs at the network layer.

While handoff at the datalink layer could be faster, it entails additional complexity in managing two networks, namely, the datalink network (e.g. ATM network) connecting the MSR and the base stations and another network (e.g. IP network) connecting the MSRs and GWs (Fig 5 in Kumaki et al). For example, each of these networks will have different mechanisms for supporting Quality of Service etc. that have to be managed, thereby increasing operational costs.

In the present invention, the wireless access network (from the GW to the base stations) is completely homogeneous and is managed at the network layer (IP). This is advantageous since it reduces the cost of operating the network significantly as the operator does not have to worry about handoff issues at layer 3 and layer 2 (such as managing ATM PVCs).

The present invention does, however, entail additional complexity in the protocol in order to make the network layer handoff efficient. For example, the present invention does not assume a fixed router as an MSR (the cross-over router is determined dynamically since we have to adapt to IP topology variations); thus, the protocol uses the IP routing mechanism to update entries between all routers along the path connecting old and new base stations.

With regard to Claims 12, the present invention also has a protocol mechanisms such as soft-state and refresh messages (Fig 12 in our patent) to handle topology changes (e.g. router failures) and optimize routes. These features are not disclosed or suggested by Kumaki.

Additionally, regarding Claims 1, 13 and 20, the handoff mechanism in Kumaki et al. involves realizing multiple connections at the MSR to the old and new basestations (col 56, lines 38-53). Thus, data packets first arrive at the MSR and then are forwarded to both the new and old base stations. This approach could lead to transmission of duplicate packets over the air (when the

mobile terminal is attached to both base stations) resulting in wastage of limited wireless capacity.

In the present invention (Claims 1, 13 and 20), data packets arrive either at the old base station (prior to handoff) or at the new base station (after handoff) - thus, there are no duplicate packets sent over the precious wireless link. We ensure that the handoff is accomplished extremely quickly (in a few milliseconds) so that there is no packet loss as well.

Based on the above remarks and the amendments to the claims, applicants submit that the claims have been shown to be allowable in view of the prior art and that the basis for any rejections has been overcome.

Conclusion

Having fully addressed the Examiner's rejections it is believed that, in view of the preceding remarks, this application stands in condition for allowance. Accordingly, reconsideration and allowance are respectfully solicited. If, however, the Examiner is of the opinion that such action cannot be taken, it is respectfully requested that the Examiner contact the applicants' attorney at (732) 949-9742, so that a mutually convenient date and time for a telephonic interview may be scheduled.

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If any additional fees are due with respect to this amendment, please charge them to Deposit Account No. 12-2325

Respectfully submitted,

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Lucent Technologies Inc.
Dated: August 13, 2003

I hereby certify that this correspondence is being deposited in the United States Postal Service as first class mail in an envelope with sufficient postage addressed to: The Assistant Commissioner of Patents and Trademarks, Box Non-Fee Amendment, Washington, D.C. 20231 on August 13, 2003

Tamika Gatson